

REMARKS

The Applicants sincerely appreciate the thorough examination of the present application as evidenced by the Office Action of May 23, 2006. In response, the Applicants have amended Claims 3, 12, and 14 to overcome all rejections under 35 U.S.C. Sec. 112. In the following remarks, the Applicants will show that all claims are patentable over the cited art. A Notice of Allowance is thus respectfully requested in due course.

I. All Rejections Under 35 U.S.C. Sec. 112 Have Been Overcome

Claims 3-25 and 21-27 have been rejected under 35 U.S.C. Sec. 112 as being indefinite. In response, the Applicants have amended independent Claims 3, 12, and 14 to recite "the substrate" as suggested by the Examiner. Accordingly, all rejections under 35 U.S.C. Sec. 112 have been overcome.

II. Withdrawal Of All Rejections Under 35 U.S.C. Sec. 102 Is Requested

Page 2 of the Office Action states that "Claims 12, 16, 17, 25, and 26 are rejected under 35 U.S.C. Sec. 102(e) as being anticipated by Sandhu...." The Applicants respectfully note, however, the no further explanation/rational is given for these rejections. Moreover, page 15 states that "The 102 rejections under ... Sandhu et al have been dropped," and Claims 16 and 17 have been previously canceled.

Accordingly, the Applicants believe that the noted rejections under 35 U.S.C. Sec. 102(e) have been included in the Office Action in error. Accordingly, withdrawal of all rejections under 35 U.S.C. Sec. 102(e) is respectfully requested. In the event that the rejections under 35 U.S.C. Sec. 102(e) were intended to be included in the Office Action, the Applicants respectfully request that an explanation/rational for such rejections be provided in a non-final Office Action.

III. Claim 3 Is Patentable

Claim 3 has been rejected under under 35 U.S.C. Sec. 103(a) as being unpatentable over U.S. Patent No. 6,352,594 to Cook et al. ("Cook") in view of U.S. Patent No. 6,449,425 to Sandhu *et al.* ("Sandhu"); as being unpatentable over U.S. Patent No. 6,352,593 Brors *et al.* ("Brors") in view of Sahdhu; as being unpatentable over U.S. Patent No. 3,603,284 to

Garnache ("Garnache") in view of Sandhu; and as being unpatentable over U.S. Patent No. 3,805,736 to Foehring et al. ("Foehring") in view of Sandhu.

As amended to address rejections under 35 U.S.C. Sec. 112, Claim 3 recites a deposition system for depositing a layer on a substrate, the deposition system comprising:

- a process chamber;
- a susceptor in the process chamber, the susceptor being configured to receive a substrate for depositing a layer thereon; and
- a showerhead on a side of the process chamber such that a plane defined by a surface of a substrate received on the susceptor extends beyond an edge of the substrate and intersects the showerhead, the showerhead being configured to receive reaction gases and to introduce the reaction gases into the process chamber, the showerhead including a heating element therein for heating reaction gases prior to introducing the reaction gases into the reaction chamber, wherein the showerhead is further configured to spray the reaction gases into the process chamber in parallel with a substrate received on the susceptor wherein the showerhead comprises,
 - a housing,
 - at least one inlet port through which the reaction gases are received into the showerhead, and
 - a spray plate adjacent the process chamber through which reaction gases are introduced into the process chamber,
 - wherein the heating element comprises a heating wire in the housing between the inlet port and the spray plate.

Claim 3 is patentable over the cited are for at least the reasons discussed below.

A. Claim 3 Is Patentable Over The Combination Of Cook And Sandhu

The Office Action concedes that: "Cook et al differs from the present invention in that Cook does not teach a wire gas heater in the first plenum and connected to a terminal."

Office Action, page 3. In support of the rejection, the Final Office Action states that:

Sandhu ... teaches a CVD apparatus that includes: a processing chamber 201; a susceptor 204 for holding a substrate 206; a shower head 210 comprising a housing 342, a spray plate 234, inlet ports 238, 240, and a wire heating element 222 in the housing between the inlet ports and the spray plate. The wire heats and partially ionizes the processing gases prior to entering the processing chamber. (Entire documents, specifically, figures 9-12 and column 8 lines 42-67)

The motivation for adding the gas heater of Sandhu et al to the apparatus of Cook et al is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al.

Therefore it would have been obvious ... to add the gas heater of Sandhu et al to the apparatus of Cook et al.

Office Action, page 3.

As set forth in the Manual Of Patent Examining Procedure (MPEP), three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *See*, MPEP, Sec. 2143. Moreover, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away (or teach away) from the claimed invention. *See*, MPEP, Sec. 2142.02(VI).

The Applicants respectfully submit that there is no motivation to modify the apparatus of Cook to include the gas heater of Sandhu, and that Cook actually teaches away from such a modification. As discussed in portions of Cook cited in the Final Office Action:

FIG. 7 illustrates a gas injector 78 having a body 80.... Two gas fittings 84, 86 are shown, providing input for reactant gas to gas channels 88, 90. A water channel 92 is shown between the channels 88, 90 for passage of water to cool the injector 78. (Underline added.)

Cook, col. 4, lines 63-65. Cook teaches away from inclusion of heating element 222 coupled to a gas conduit from Sandhu because Cook discusses "passage of water to cool the injector 78."

The Office Action further states that " The motivation for adding the gas heater of Sandhu et al to the apparatus of Cook et al is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al." The Applicants respectfully submit that the Office Action is improperly combining two references to modify the primary Cook reference to provide the opposite of its stated functionality (*i.e.*, cooling the injector 78). Accordingly, the Applicants submit that there is no motivation to combine Cook and Sandhu as suggested by the Office Action, and that in fact, Cook teaches away from such a combination. Moreover, it would not be obvious to somehow selectively substitute elements of the Sandhu processing apparatus (where the wafer 206 is maintained perpendicular to a direction of gas flow) for elements of the Cook deposition apparatus (where the wafer is maintained parallel to a direction of gas flow).

Accordingly, the Applicants respectfully submit that the combination of Cook and Sandhu fails to teach or suggest the recitations of Claim 3 and that Claim 3 is thus patentable over the combination of Cook and Sandhu.

B. Claim 3 Is Patentable Over The Combination Of Brors And Sandhu

Claim 3 is patentable over the combination of Brors and Sandhu for reasons similar to those discussed above with respect to the rejection based on Cook and Sandhu. The Office Action concedes that: "Brors et al differs from the present invention in that Brors et al does not teach a wire gas heater in the first plenum and connected to a terminal." Office Action, page 6. In support of the rejection, the Office Action states that:

Sandhu ... teaches a CVD apparatus that includes: a processing chamber 201; a susceptor 204 for holding a substrate 206; a shower head 210 comprising a housing 342, a spray plate 234, inlet ports 238, 240, and a wire heating element 222 in the housing between the inlet ports and the spray plate. The wire heats and partially ionizes the processing gases prior to entering the processing chamber. (Entire documents, specifically, figures 9-12 and column 8 lines 42-67)

The motivation for adding the gas heater of Sandhu et al to the apparatus of Brors et al is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al.

Therefore it would have been obvious ... to add the gas heater of Sandhu et al to the apparatus of Brors et al.

Office Action, page 7.

The Applicants respectfully submit that there is no motivation to modify the apparatus of Brors to include the gas heater of Sandhu, and that Brors actually teaches away from such a modification. As discussed in Brors:

The flow pattern of the process gases is vital to the formation of uniform layers upon wafers 44.... Referring now to FIG. 30, process gases to be used in depositing layers on wafers 44 are provided via ducts 202 to a mixing chamber 204 which, along with a plurality of gas flow control devices 206 and a water-cooled injection plate 210, is included within gas injection manifold 200. (Underline added.)

Brors, col. 15, lines 45-54. *See also*, Brors, col. 16 lines 28-29 and 57-58. Brors thus teaches away from inclusion of heating element 222 coupled to a gas conduit from Sandhu because Brors discusses "a water-cooled injection plate ... included within gas injection manifold" in a system where the "flow pattern of the process gases is vital...."

The Office Action further states that "The motivation for adding the gas heater of Sandhu et al to the apparatus of Brors et al is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al." The Applicants respectfully submit that the Office Action is improperly combining two references to modify the primary Brors reference to provide the opposite of its stated functionality (*i.e.*, cooling the injection plate). Accordingly, the Applicants submit that there is no motivation to combine Brors and Sandhu as suggested by the Office Action, and that in fact, Brors teaches away from such a combination. Moreover, it would not be obvious to somehow selectively substitute elements of the Sandhu processing apparatus (where the wafer 206 is maintained perpendicular to a direction of gas flow) for elements of the Brors process chamber (where the wafer is maintained parallel to a direction of gas flow).

Accordingly, the Applicants respectfully submit that the combination of Brors and Sandhu fails to teach or suggest the recitations of Claim 3 and that Claim 3 is thus patentable over the combination of Brors and Sandhu.

C. Claim 3 Is Patentable Over The Combination Of Garnache And Sandhu

Claim 3 is patentable over the combination of Garnache and Sandhu for reasons similar to those discussed above with respect to the rejection based on Cook and Sandhu and the rejection based on Brors and Sandhu. The Office Action concedes that: "Garnach differs from the present invention in that Garnache does not teach a wire gas heater in the first plenum and connected to a terminal." Office Action, page 9. In support of the rejection, the Office Action states that:

Sandhu ... teaches a CVD apparatus that includes: a processing chamber 201; a susceptor 204 for holding a substrate 206; a shower head 210 comprising a housing 342, a spray plate 234, inlet ports 238, 240, and a wire heating element 222 in the housing between the inlet ports and the spray plate. The wire heats and partially ionizes the processing gases prior to entering the processing chamber. (Entire documents, specifically, figures 9-12 and column 8 lines 42-67)

The motivation for adding the gas heater of Sandhu et al to the apparatus of Garnache is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al.

Therefore it would have been obvious ... to add the gas heater of Sandhu et al to the apparatus of Garnache.

Office Action, pages 9-10.

The Applicants respectfully submit that there is no motivation to modify the apparatus of Garnache to include the gas heater of Sandhu, and that Garnache actually teaches away from such a modification. As discussed in Garnache:

Also shown in a heat shield 40 which may be mounted on the reaction chamber side of gas distribution baffle 38. The purpose of heat shield 40 is to reflect energy radiated from ... the heated susceptor 28 which may prove harmful to baffle 38.... The plate is constructed such that it ... will effectively prevent the baffle 38 from overheating and perhaps out-gassing or decomposing. (Underline added.)

Garnache, col. 3, lines 28-39. Garnache thus teaches away from inclusion of heating element 222 coupled to a gas conduit from Sandhu because Garnache discusses a heat shield to "prevent the baffle from overheating."

The Office Action further states that "The motivation for adding the gas heater of Sandhu et al to the apparatus of Garnache is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al." The Applicants respectfully submit that the Office Action is improperly combining two references to modify the primary Garnache reference to provide the opposite of its stated functionality (*i.e.*, reflecting heat away from the baffle so that the baffle does not overheat). Accordingly, the Applicants submit that there is no motivation to combine Garnache and Sandhu as suggested by the Office Action, and that in fact, Garnache teaches away from such a combination. Moreover, it would not be obvious to somehow selectively substitute elements of the Sandhu processing apparatus (where the wafer 206 is maintained in a horizontal orientation) for elements of the Garnache vapor deposition apparatus (where the substrates 30 are maintained in a vertical orientation).

Accordingly, the Applicants respectfully submit that the combination of Garnache and Sandhu fails to teach or suggest the recitations of Claim 3 and that Claim 3 is thus patentable over the combination of Garnache and Sandhu.

D. Claim 3 Is Patentable Over The Combination Of Foehring And Sandhu

Claim 3 is patentable over the combination of Foehring and Sandhu for reasons similar to those discussed above with respect to the rejection based on Cook and Sandhu, the rejection based on Brors and Sandhu, and the rejection based on Garnache and Sandhu. The Office Action concedes that: "Foehring et al differs from the present invention in that

Foehring does not teach a wire gas heater in the first plenum and connected to a terminal."

Office Action, page 12. In support of the rejection, the Office Action states that:

Sandhu ... teaches a CVD apparatus that includes: a processing chamber 201; a susceptor 204 for holding a substrate 206; and a shower head 210 comprising a housing 342, a spray plate 234, inlet ports 238, 240, and a wire heating element 222 in the housing between the inlet ports and the spray plate. The wire heats and partially ionizes the processing gases prior to entering the processing chamber. (Entire documents, specifically, figures 9-12 and column 8 lines 42-67)

The motivation for adding the gas heater of Sandhu et al to the apparatus of Foehring is to heat and partially ionize the gas prior to its entry into the processing chamber as taught by Sandhu et al.

Therefore it would have been obvious ... to add the gas heater of Sandhu et al to the apparatus of Foehring et al.

Office Action, page 12.

The Applicants respectfully submit that there is no motivation to modify the apparatus of Foehring to selectively substitute elements of Sandhu into Foehring. As shown in Figures 2 and 3 of Foehring, reactant gas flow is parallel to the surface of the substrate 36, while the reactant gas flow of Sandhu is perpendicular to the surface of wafer 206. As discussed in Foehring:

Because the reactant gases are passed over the substrate surfaces in laminar flow it is possible to maintain a substantially uniform, and controllable, deposition rate. ... Because turbulent flow is not used, no unpredictable irregularities in the flow pattern can cause irregular deposition rates at different parts of a substrate surface.

Foehring, col. 5, line 62 to col. 6, line 2. Accordingly, it would not be obvious to selectively substitute elements of the apparatus of Sandhu providing perpendicular reactive gas flow into the apparatus of Foehring providing parallel reactive gas flow.

Accordingly, the Applicants respectfully submit that the combination of Foehring and Sandhu fails to teach or suggest the recitations of Claim 3 and that Claim 3 is thus patentable over the combination of Foehring and Sandhu.

**E. Allowance Of Independent Claim 3 And
Dependent Claims 4-11 Is Respectfully Requested**

For at least the reasons discussed above, the Applicants respectfully submit that Claim 3 is patentable over the combination of Sandhu with Cook, Brors, Garnache, and/or Foehring.

In addition, dependent Claims 4-11 are patentable at least as per the patentability of Claim 3 from which they depend. Allowance of Claims 3-11 is respectfully requested.

IV. Claims 12 And 14 Are Patentable

Claims 12 and 14 have been rejected under 35 U.S.C. Sec. 103(a) as being unpatentable over Cook, Sandhu, U.S. Patent No. 5,958,140 to Arami *et al.* ("Arami") and further in view of U.S. Patent No. 6,059,885 to Ohashi *et al.* ("Ohashi"); as being unpatentable over Brors and Sandhu and further in view of Ohashi; and as being unpatentable over Foehring, Sandhu, and Arami, and further in view of Ohashi. The Applicants respectfully submit that Claims 12 and 14 are patentable over the cited art for at least the reasons discussed below.

Claim 12, for example, recites a deposition system for depositing a layer on a substrate. More particularly, the deposition system includes:

- a process chamber;
 - a susceptor in the process chamber, the susceptor being configured to receive the substrate for depositing a layer thereon; and
 - a showerhead on a side of the process chamber such that a plane defined by a surface of the substrate received on the susceptor extends beyond an edge of the substrate and intersects the showerhead, the showerhead being configured to receive reaction gases and to introduce the reaction gases into the process chamber, the showerhead including a heating element therein for heating reaction gases prior to introducing the reaction gases into the reaction chamber;
- wherein the showerhead comprises a plurality of plenums therein such that each plenum receives at least one respective reaction gas from a respective gas inlet port such that reaction gases from the plenums are introduced into the process chamber without prior mixing of the reaction gases between plenums within the showerhead wherein the plurality of plenums comprises respective base portions thereof having spray holes therethrough, wherein the respective base portions are co-planar, wherein the first plenum defines a first cavity providing fluid communication between a first gas inlet port and a first plurality of spray holes, wherein the second plenum defines a second cavity providing fluid communication between a second gas inlet port and a second plurality of spray holes, wherein the first and second cavities are separated, and wherein the first plenum has a length perpendicular to the co-planar base portions that is greater than a length of the second plenum perpendicular to the co-planar base portions..

Claims 12 and 14 are patentable over the cited art for at least the reasons discussed below.

**A. Claims 12 And 14 Are Patentable Over The
Combination Of Cook, Sandhu, Arami, And Ohashi**

The Office Action concedes that "Cook et al, Sandhu et al, and Arami et al differ from the present invention in that they do not teach that the first plenum extends further from the processing chamber than the second plenum." Office Action, page 5. In support of the rejection, the Office Action states that:

Ohashi et al teaches a first plenum S extends further from the processing chamber than the second plenum 719'. (Figure 7)

The motivation for elongating the first plenum in the apparatus of Cook et al, Sandhu et al, and Arami et al is to provide a specific shape for the plenums as taught by Ohashi et al. Furthermore, it has been held that change in shape is a matter of choice which a person of ordinary skill in the art would have found obvious. (See In Re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04(d)).

Office Action, pages 5-6.

The Applicants respectfully submit, however, that it would not be obvious to selectively combine elements of Sandhu, Arami, and/or Ohashi into the apparatus of Cook for reasons similar to those discussed above with respect to Claim 3. In particular, it would not be obvious to somehow selectively substitute elements of Sandhu (where the wafer 206 is perpendicular to a direction of gas flow), Arami (where the wafer W is perpendicular to a direction of gas flow), and/or Ohashi (where the wafer substrate 711 is perpendicular to a direction of gas flow) for elements of the primary Cook deposition apparatus (where the wafer is parallel to a direction of gas flow). Moreover, Cook teaches away from a showerhead including a heating element therein (as recited in Claims 12 and 14) because Cook states that:

FIG. 7 illustrates a gas injector 78 having a body 80.... Two gas fittings 84, 86 are shown, providing input for reactant gas to gas channels 88, 90. A water channel 92 is shown between the channels 88, 90 for passage of water to cool the injector 78. (Underline added.)

Cook, col. 4, lines 63-65. Cook thus teaches away from a showerhead including a heating element as recited in Claims 12 and 14.

Accordingly, Claims 12 and 14 are patentable over the combination of Cook, Sandhu, Arami, and Ohashi.

**B. Claims 12 And 14 Are Patentable Over The
Combination Of Brors, Sandhu, And Ohashi**

The Office Action concedes that "Brors et al, and Sandhu et al differ from the present invention in that they do not teach that the first plenum extends further from the processing chamber than the second plenum." Office Action, page 8. In support of the rejection, the Office Action states that:

Ohashi et al teaches a first plenum S extends further from the processing chamber than the second plenum 719'. (Figure 7)

The motivation for elongating the first plenum in the apparatus of Cook et al, Sandhu et al, and Arami et al is to provide a specific shape for the plenums as taught by Ohashi et al.

Office Action, pages 8-9.

The Applicants respectfully submit, that it would not be obvious to selectively combine elements of Sandhu and/or Ohashi into the process chamber of Brors for reasons similar to those discussed above with respect to Claim 3. In particular, it would not be obvious to somehow selectively substitute elements of Sandhu (where the wafer 206 is perpendicular to a direction of gas flow) and/or Ohashi (where the wafer substrate 711 is perpendicular to a direction of gas flow) for elements of the primary Brors process chamber (where the wafers 44 are parallel to a direction of gas flow). Moreover, Brors teaches away from a showerhead including a heating element therein (as recited in Claims 12 and 14) because Brors states that:

The flow pattern of the process gases is vital to the formation of uniform layers upon wafers 44.... Referring now to FIG. 30, process gases to be used in depositing layers on wafers 44 are provided via ducts 202 to a mixing chamber 204 which, along with a plurality of gas flow control devices 206 and a water-cooled injection plate 210, is included within gas injection manifold 200. (Underline added.)

Brors, col. 15, lines 45-54. *See also*, Brors, col. 16 lines 28-29 and 57-58. Brors thus teaches away from a showerhead including a heating element as recited in Claims 12 and 14.

Accordingly, Claims 12 and 14 are patentable over the combination of Brors, Sandhu, and Ohashi.

**C. Claims 12 And 14 Are Patentable Over The
Combination Of Foehring, Sandhu, Arami, And Ohashi**

The Office Action concedes that "Foehring et al, Sandhu et al, and Arami et al differ from the present invention in that they do not teach that the first plenum extends further from the processing chamber than the second plenum." Office Action, page 14. In support of the rejection, the Office Action states that:

Ohashi et al teaches a first plenum S extends further from the processing chamber than the second plenum 719'. (Figure 7)

The motivation for elongating the first plenum in the apparatus of Foehring et al, Sandhu et al, and Arami et al is to provide a specific shape for the plenums as taught by Ohashi et al.

Office Action, page 14.

The Applicants respectfully submit, however, that it would not be obvious to selectively combine elements of Sandhu, Arami, and/or Ohashi into the apparatus of Foehring for reasons similar to those discussed above with respect to Claim 3. In particular, it would not be obvious to somehow selectively substitute elements of Sandhu (where the wafer 206 is perpendicular to a direction of gas flow), Arami (where the wafer W is perpendicular to a direction of gas flow), and/or Ohashi (where the wafer substrate 711 is perpendicular to a direction of gas flow) for elements of the primary Foehring apparatus (where the substrate 36 is parallel to a direction of gas flow).

Accordingly, Claims 12 and 14 are patentable over the combination of Foehring, Sandhu, Arami, And Ohashi.

**D. Allowance Of Independent Claims 12 And 14 And
Dependent Claims 13, 15, And 21-27 Is Respectfully Requested**

The Applicants thus submit that Claims 12 and 14 are patentable over the cited art for at least the reasons discussed above. In addition, dependent Claims 13, 15, and 21-27 are patentable at least as per the patentability of Claims 12 and 14 from which they depend.

In support of the rejections of Claims 12 and 14, the Office Action has stated (on pages 6, 9, and 14-15) that:

It has been held that a change in shape is a matter of choice which a person of ordinary skill in the art would have found obvious. (See *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) MPEP 2144.04(d))

The Applicants respectfully submit, however, that this is a misstatement of the law and of the MPEP. In particular, the relevant portion of the MPEP states that:

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

MPEP, Sec. 2144 (IV)(B). In Claims 12 and 14, relative lengths of the plenums is significant as discussed, for example, in the application (as originally filed) at pages 9 and 10.

V. Remarks Regarding "Response To Arguments" Section Of The Office Action

In the "Response to Arguments" section of the Office Action, extensive commentary has been provided regarding the Ryoji patent and previous rejections based on the Ryoji patent. The Applicants have not further addressed the Ryoji patent because no rejections are currently based on the Ryoji patent.

The "Response to Arguments" section of the Office Action also discusses two previously uncited patent publications, U.S. Patent Publication 2003/010938 to Ronsse ("Ronsse") and U.S. Patent Publication 2001/0035127 to Metzner ("Metzner"). Neither of these patent publications, however, has been used as a basis for rejection. Moreover, Ronsse is not prior art with respect to the present application because Ronsse was filed after the priority date of the present application and because the Applicants' priority claim was perfected by submission of the English translation of the Korean priority application and the Statement of Accuracy of a Translation with the Amendment filed September 14, 2005.

If any claim(s) are intended to be rejected based on Metzner, the Applicants respectfully request that the claim rejection(s) be set forth in a non-final Office Action. In particular, the Applicants request particular identification of the claim(s) being rejected, of the reference(s) being used to support the rejection, and of the rational for the rejection including identification of particular portions of the reference(s) supporting the rejection.

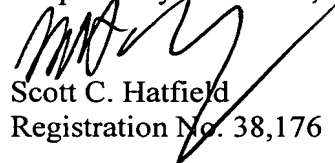
As noted above, Ronsse is not prior art with respect to the present application. To the extent that Metzner is used as the basis for a rejection, the Applicants request that the rejection point out particular portions of Metzner that are relied on to support the rejection. In addition, the Applicants note that it would not be obvious to selectively substitute elements

of Metzner into the apparatus of Cook, for example, because Cook relates to deposition of silicon (*see* Cook, col. 1, lines 30-40; col. 7, lines 11-65; and col. 9, lines 6-41) while Metzner relates to deposition of a high dielectric constant film such as Tantalum Oxide (*see* Metzner, paragraph 2).

CONCLUSION

Accordingly, the Applicants submit that all pending claims in the present application are in condition for allowance, and a Notice of Allowance is respectfully requested in due course. The Examiner is encouraged to contact the undersigned attorney by telephone should any additional issues need to be addressed.

Respectfully submitted,



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Joyce Paoli

